

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



15 FEB 2005

(43) International Publication Date  
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number  
**WO 2004/016886 A3**

(51) International Patent Classification<sup>7</sup>:  
E05G 1/00, F16B 41/00, E04H 12/22

E05B 37/00,

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(21) International Application Number:

PCT/DK2003/000546

(22) International Filing Date: 15 August 2003 (15.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

PA 2002 01213 15 August 2002 (15.08.2002) DK

PA 2002 01589 16 October 2002 (16.10.2002) DK

PA 2003 00057 20 January 2003 (20.01.2003) DK

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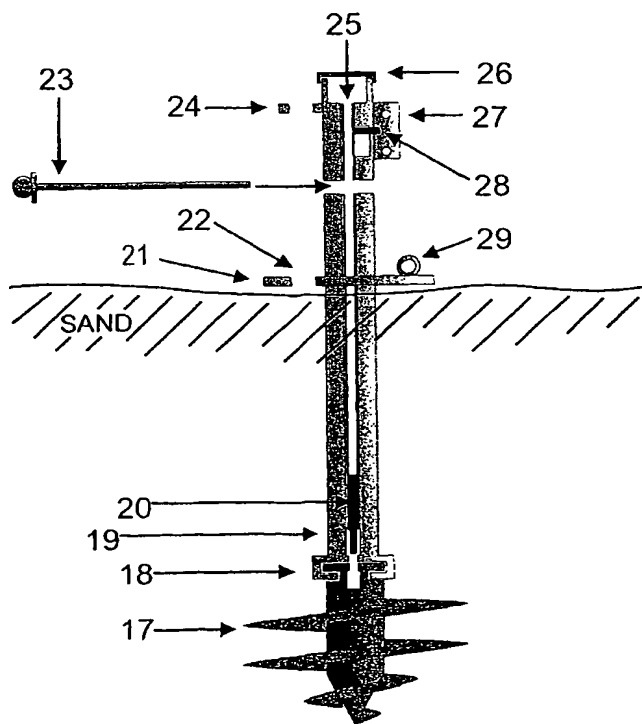
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(81) Designated States (*national*): AE, AG, AL, AM, AT (util-  
ity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (util-  
ity model), DE, DK (utility model), DK, DM, DZ, EC, EE  
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,  
RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: A SAFETY BOX FOR STORING PERSONAL VALUABLES, A SAFETY ANCHOR FOR SECURING THE SAFETY BOX AND SAFETY FASTENERS FOR SECURING A VARIETY OF OTHER OBJECTS



(57) Abstract: The invention provides a box, termed a safety-box, which can be physically attached to a hard-to-move-object and used for safe and convenient storage of personal valuables on beaches and other public or semi-public places. Furthermore, the invention provides a lock for a safety-box, a beach chair comprising a safety-box, a device, termed a safety-anchor, which in a first aspect can be easily installed into the ground but which is very difficult to remove for anyone but the authorised user and consequently can serve as a hard-to-move-object for securing the safety-box or other devices. In another aspect of the invention, the principle behind the safety-anchor is used to provide novel safety-fasteners that can be used to secure a diversity of objects against unauthorised removal. The safety-fasteners of the invention combine the attributes of ordinary fasteners with the ability to be converted into a safety-fastener by any of a number of very simple operations. Fasteners based on the invention can thus be mounted as ordinary fasteners using a variety of standard tools and, once mounting is satisfactory, turned into a safety-fastener that cannot be easily removed by unauthorised persons. Finally the invention provides a special safety-fastener, termed a lock-safety-fastener, which can be used to effectively secure a diversity of objects against unauthorised removal whilst at the same time allowing easy attachment/detachment of the valuable object by the authorised user.

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**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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**(88) Date of publication of the international search report:**  
25 March 2004

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## INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/03/00546

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 E05B37/00 E05G1/00 F16B41/00 E04H12/22

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 E05B E05G F16B E04H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 36 05 859 A (SCHULTE SCHLAGBAUM AG) 27 August 1987 (1987-08-27) the whole document	1-5,7-9, 12,13
Y	---	7,10,11, 16,17
Y	US 5 216 909 A (ARMOOGAM MICHAEL A) 8 June 1993 (1993-06-08) the whole document	7
Y	GB 2 201 993 A (UNIONWEST LTD) 14 September 1988 (1988-09-14) the whole document	10,11
A	DE 33 28 694 A (ILIEV ALBERT DIPL ING) 28 February 1985 (1985-02-28) the whole document	1-13
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

#### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- "&" document member of the same patent family

Date of the actual completion of the international search

14 January 2004

Date of mailing of the international search report

27. 01. 2004

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/ 03/00546

### C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 142 388 A (PHILLIPS PETER J) 6 March 1979 (1979-03-06) the whole document ---	1-13
A	DE 600 841 C (JOSE MARIA SAMANIEGO) 1 August 1934 (1934-08-01) the whole document ---	1-13
X	US 4 971 390 A (MCGINLEY JOHN) 20 November 1990 (1990-11-20)  the whole document	14,15, 19-21, 24,25, 27,28, 31,32
Y		16-18, 21,22, 29,30,33
Y	US 5 401 904 A (GREENIER JR WILLIAM A) 28 March 1995 (1995-03-28) the whole document ---	18
Y	US 6 085 071 A (HAYAMA HIDEKI ET AL) 4 July 2000 (2000-07-04) the whole document ---	21,22
Y	GB 2 345 727 A (FIELDER DAVID) 19 July 2000 (2000-07-19) the whole document ---	29
Y	US 3 741 132 A (BLOWER B) 26 June 1973 (1973-06-26) the whole document ---	30,33
X	US 4 454 824 A (WOOD GARY J) 19 June 1984 (1984-06-19) the whole document ---	34-50,71
A	EP 0 988 809 A (OTT WOLFGANG ;STEINERT GUENTER (DE)) 29 March 2000 (2000-03-29) the whole document ---	34-50
A	US 5 199 361 A (ROBINSON MILTON W) 6 April 1993 (1993-04-06) the whole document ---	34-50
A	EP 0 292 028 A (JANSSEN AL W M) 23 November 1988 (1988-11-23) the whole document ---	34-50
X	FR 596 867 A (GAREAU EMILE) 3 November 1925 (1925-11-03) the whole document ---	51-58, 63,64,71
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INTERNATIONAL SEARCH REPORT

Internat. Application No  
PCT/ 3/00546

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 256 015 A (ST CLAIR KENNETH A) 26 October 1993 (1993-10-26) the whole document ---	59-62
A	DE 196 33 512 A (KOPSCHINA ANDREAS) 26 February 1998 (1998-02-26) the whole document ---	59-62
A	FR 2 434 952 A (NEIMAN SA) 28 March 1980 (1980-03-28) the whole document ---	51-64
A	DE 36 22 286 A (RUEHLE ERWIN) 6 November 1986 (1986-11-06) the whole document ---	51-64
X	US 4 159 015 A (FORSBERG CHRISTER ET AL) 26 June 1979 (1979-06-26) the whole document ---	66,67
Y		68-70
Y	GB 323 444 A (HEINRICH BECK) 2 January 1930 (1930-01-02) the whole document ---	68-70
P,A	US 6 588 242 B1 (BEATY JAMES H) 8 July 2003 (2003-07-08) the whole document -----	66-70

## INTERNATIONAL SEARCH REPORT

International application No.  
T/DK 03/00546**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-13

Claims 1-13 directed to a lock for a safety box and a locking system.

2. Claims: 14-38

Claims 14-38 directed to a beach chair comprising a safety box, a safety box and a mount.

3. Claims: 34-71

Claims 34-71 directed to a safety anchor, a safety fastener, a lock safety fastener and a use of a safety anchor.

# INTERNATIONAL SEARCH REPORT

on patent family members

International Application No

PCT/D 8/00546

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 3605859	A	27-08-1987	DE 3605859 A1	27-08-1987
			CA 1289766 C	01-10-1991
			CH 673311 A5	28-02-1990
			DE 3763479 D1	09-08-1990
			EP 0234510 A2	02-09-1987
			JP 62253880 A	05-11-1987
			US 4953683 A	04-09-1990
US 5216909	A	08-06-1993	NONE	
GB 2201993	A	14-09-1988	NONE	
DE 3328694	A	28-02-1985	DE 3328694 A1	28-02-1985
US 4142388	A	06-03-1979	NONE	
DE 600841	C	01-08-1934	NONE	
US 4971390	A	20-11-1990	NONE	
US 5401904	A	28-03-1995	NONE	
US 6085071	A	04-07-2000	CN 1198612 A, B	11-11-1998
			EP 0865095 A2	16-09-1998
			JP 3466079 B2	10-11-2003
			JP 11243304 A	07-09-1999
GB 2345727	A	19-07-2000	NONE	
US 3741132	A	26-06-1973	NONE	
US 4454824	A	19-06-1984	US 4664041 A	12-05-1987
EP 0988809	A	29-03-2000	DE 19844019 A1	08-06-2000
			EP 0988809 A2	29-03-2000
US 5199361	A	06-04-1993	NONE	
EP 0292028	A	23-11-1988	NL 8700866 A	01-11-1988
			BR 8807466 A	05-06-1990
			BR 8907466 A	15-05-1990
			EP 0292028 A1	23-11-1988
			WO 8808266 A1	03-11-1988
			EP 0358651 A1	21-03-1990
			JP 2503154 T	04-10-1990
FR 596867	A	03-11-1925	NONE	
US 5256015	A	26-10-1993	NONE	
DE 19633512	A	26-02-1998	DE 19633512 A1	26-02-1998
FR 2434952	A	28-03-1980	FR 2434952 A1	28-03-1980
DE 3622286	A	06-11-1986	DE 3622286 A1	06-11-1986
US 4159015	A	26-06-1979	FI 771819 A	09-12-1977
			NO 771994 A	09-12-1977



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/03/00546

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 323444	A	02-01-1930	NONE	
US 6588242	B1	08-07-2003	NONE	